IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	) Atty. Docket: ICB0184
	) Confirmation No. 9595
Christophe BERTHAUD	)
	) Group Art Unit: 2673
Serial No. 09/631,413	)
	) Examiner: Jin Cheng Wang
Filed: August 3, 2000	)
	) Date: May 25, 2006
For: WATCH INCLUDING A CONTACTLESS CONTROL DEVICE FOR A COMPUTER CURSOR	)

SUPPLEMENTAL APPEAL BRIEF

BOX: APPEAL BRIEF
Assistant Commissioner for Patents
Washington, D. C. 20231

Sir:

In response to the Notification of Non-Compliant Appeal Brief, mailed April 28, 2006, Applicant respectfully submits this Supplemental Appeal Brief in compliance with 37 C.F.R. 41.37 with respect to the above captioned application. The present Supplemental Appeal Brief addresses and responds to all outstanding issues set for in the Final Office Action dated April 16, 2002 and subsequent Advisory Action, dated November 4, 2002, and amends minor idiomatic issues and typographical errors.

Real Party in Interest

The real party of interest is Swatch AG, of Biel, Switzerland.

Related Appeals and Interferences

There are no related appeals or interferences with respect to the above captioned application.

Status of the Claims

Claims 6 and 9 have been canceled without prejudice. Claims 1-5, 7, 8 and 10-18 are pending. Claims 1-5, 7, 8 and 10-18 stand rejected and are appealed. A copy of the appealed claims is also provided in Appendix A attached herewith.

The following claims 1-5, 7, 8 and 10-18 are under appeal:

1. A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch including first control means for controlling the movement of a cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element such that the display means are at least partially visible through the touch sensitive pads and the outer element, wherein the touch sensitive sensors are of the capacitive type and sensitive pads are formed by electrodes deposited underneath the outer element, and wherein it further includes means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors.

2. The watch according to claim 1, wherein said display means include an analogue display protected by said outer element which defines the watch crystal, said sensitive pads being at least partially superposed with said analogue display.

3. The watch according to claim 1 or 2, wherein the set of said sensitive pads of said touch sensitive sensors forming said first means is supported by said outer element.

4. The watch according to claim 1 or 2, wherein a part of said sensitive pads of said touch sensitive sensors is arranged in the top portion of the case of the watch surrounding said outer element.

5. The watch according to claim 1, wherein said respective sensitive pads of said plurality of touch sensitive sensors are arranged in the shape of a matrix defining lines and columns which extend over most of said outer element.

6. (Cancelled)

7. The watch according to claim 1, wherein the ratio between the movement of said cursor and the path taken by a user's finger across said outer element is less at low speed or actuation frequency than at relatively high speed or actuation frequency.

8. The watch according to claim 5, wherein the movement of said cursor over said computer screen substantially corresponds to the path taken by the user's finger over said outer element.

9. (Cancelled)

10. A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch including first control means for controlling the movement of a cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element such that the display means are at least partially visible through the touch sensitive pads and the outer element, wherein the touch sensitive sensors are of the capacitive type and sensitive pads are formed by electrodes deposited underneath the outer element, wherein said sensitive pads are arranged in concentric zones, the direction of movement of said cursor being determined by the orientation of the pad or pads actuated relative to the centre of said concentric zones, and wherein the speed of movement of said cursor depends on the concentric zone actuated or two adjacent concentric zones which are actuated simultaneously.

11. The watch according to claim 1, further including second control means for selecting an object shown on said screen or carrying out a command relating to said object.

12. The watch according to claim 11, wherein said second control means are arranged in the top portion of the case substantially in the 6 o'clock position.

13. A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or

forming an outer portion of the display means, said watch including first control means for controlling the movement of a cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element such that the display means are at least partially visible through the touch sensitive pads and the outer element, wherein the touch sensitive sensors are of the capacitive typer and sensitive pads are formed by electrodes deposited underneath the outer element, further including second control means for selecting an object shown on said screen or carrying out a command relating to said object, wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof.

14. The watch according to claim 11, wherein said second control means are formed by a push-button associated with an electric contactor.

15. The watch according to claim 11, wherein said second control means are arranged in a link of the wristband of the watch or in a portion of the wristband of the watch.

16. The watch according to claim11, wherein said second control means are formed by said outer element associated with a pressure sensor, said selection of an object or said command relating to said object being performed by applying pressure onto said outer element.

17. The watch according to claim 16, wherein said pressure sensor is formed by a piezoelectric crystal arranged on the periphery of said outer element.

18. The watch according to claim 11, wherein said second control means are formed by said outer element associated with at least one micro-contactor or small travel contactor.

Status of Amendments

Amendment (F) After Final, filed August 13, 2004, has been entered by the Examiner per the Advisory Action dated October 22, 2004.

Summary of the Claimed Subject Matter

The present invention pertains generally to a watch including display means for at least one item of time related data and having an at least partially transparent outer element covering the display means or forming an outer portion of the display means, such as relates to a watch associated with a control device for a computer cursor. In particular, the embodiments of independent claims 1, 10 and 13 pertain to a watch that includes display means for at least one item of time related data, (for example, see specification, p. 2, lines 16-20, and p. 3, lines 15-16, and see Abstract, and see Figure 1, elements 8 and 10), and an at least partially transparent outer element (for example, see specification, p. 3, lines 15-16, and see Figures 1 and 7, element 4) covering the display means or forming an outer portion of the display means, wherein first control means for controlling the

movement of a cursor on a computer screen is formed of a plurality of touch sensitive sensors (for example, see specification, p. 3, lines 19-29, as shown in part by sensitive pads 16 in Figure 7) such that the display means (for example, elements 8 and 10 in the Figures) is at least partially visible through the touch sensitive pads (16) as evident, for example, from Figures 1, 4, 5 and 6 of the present application.

Independent claim 1 additionally recites a means for detecting the speed of a user's finger (for example, see specification, p. 4, lines 17-24, p. 5, lines 6-8 and lines 25-33, and as would be inherent in Figures 1 and 4) over an outer element (for example, see crystal 4 in Figure 1).

Independent claim 10 additionally recites that the sensitive pads 16 are arranged in concentric zones as shown in Figure 4 (for example, specification, p. 5, lines 21-22), the direction of movement of the cursor being determined by the orientation of the pad or pads actuated relative to the centre of the concentric zones (for example, specification, p. 5, lines 25-27), and wherein the speed of movement of the cursor depends on the concentric zone actuated or two adjacent concentric zones which are actuated simultaneously (for example, specification, p. 5, lines 27-36).

Independent claim 13 additionally recites second control means for selecting an object shown on said screen or carrying out a command relating to said object (for example, specification, p. 5, line 36, to p. 6, line 1, see element 26 in Figure 4), wherein the second control means is also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element (4) and located in the central region thereof

The various embodiments, in accordance with the present invention, advantageously integrate a contactless computer mouse with a watch using a compact

structure because the outer element covering the display means provides a support for the partially transparent touch sensitive pads. Thus, a watch constructed in accordance with the present invention has its display means at least partially visible through the touch sensitive pads and the outer element.

Grounds of Rejection to be Reviewed on Appeal

The grounds for rejection presented for review is the rejection of independent claims 1, 10 and 13 under 35 U.S.C. § 103(a) over U.S. Patent 6,184,871 B1 to Teres et al. (hereafter, the Teres Patent) in view of U.S. Patent 6,137,479 to Olsen et al. (hereafter, the Olsen Patent), and further in view of U.S. Patent 6,392,636 B1 to Ferrari et al. (hereafter, the Ferrari Patent).

Applicants' Arguments

1. A prima facie case of obviousness under 35 U.S.C. 103 has not been established because numerous limitations in the claims have been ignored or misconstrued.

A patentability analysis under 35 U.S.C. § 103 requires (a) determining the scope and content of the prior art, (b) ascertaining the differences between the prior art and the claimed subject matter, (c) resolving the level of ordinary skill in the pertinent art, and (d) considering secondary considerations that may serve as indicia of nonobviousness or obviousness. Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18; 86 S.Ct. 684, 694; 148 U.S.P.Q. 459, 467 (1966).

In the present case, claims 1-5, 7, 8 and 10-18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the Teres Patent in view of the Olsen Patent, and further in

view of the Ferrari Patent. However, as will be explained below, multiple elements in the claims, as properly construed are not present in the asserted combination of references. Specifically, the rejection ignores or misconstrues numerous elements of the claims. Appellant's positions are explained in detail as follows.

Claim 1

The following general argument pertains to claim 1, and to the remaining claims 2-5, 7, 8 and 10-18, wherein the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent does not reasonably teach a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads" as recited in claim 1 and in each claim of the present application. Claim 1 is additionally patentable because neither the Teres Patent, the Olsen Patent, nor the Ferrari Patent teach the "means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors" as recited in claim 1.

In support of the Applicants position, the scope and content of the prior art is discussed.

The Teres Patent

The Teres Patent teaches an "identification device of a manual action on a surface, in particular for a timepiece" such as the watch (1) shown in Figure 1. The watch includes a case (2), a glass (6), hour and minute hands (7), (8), and numerical display devices (9), (10). An electronic circuit (23) is arranged in the case (2) as shown in Figure 2, and the

circuit (23) is connected to multiple conducting electrodes (K), (M), (S), (O), (E) that are arranged on the interior face (24) of the glass (6). These sensors are placed on the glass so the electronic circuit of the watch can identify the writing of a character on the surface of the glass (col. 2, lines 5-8). Preferably, the conducting electrodes are transparent (col. 2, lines 39-44). In Fig. 3, the Teres Patent shows one configuration for multiple conducting electrodes, which form a part of a set of capacitive sensors (41) actuable by a finger (32), (col. 2, lines 58-64). Figure 5 schematically illustrates the circuit for an individual sensor (41).

The Teres Patent teaches that the sensors (41) may be arranged not only on the glass (6), but at the periphery below the bezel (col. 5, lines 11-13). The Teres Patent also teaches that "push-buttons or any other new control devices may be replaced by the sensors...described hereabove" (col. 5, lines 13-16).

As admitted by the Examiner (Advisory Action dated October 22, 2004, page 2, line 12), the Teres Patent "is silent to the movement of cursor on a computer screen." Thus, the Teres Patent cannot teach, or even suggest, the "first control means for controlling the movement of a cursor on a computer screen" and related features recited in claims 1, 10 and 13.

In addition, the Teres Patent cannot teach, or even suggest, (i) the "means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors" as recited in claim 1; (ii) "the direction of movement of said cursor depends on the concentric zones actuated or two adjacent concentric zones which are actuated simultaneously" as recited in claim 11; and (iii) the "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein said second control means are also formed by a touch sensitive sensor

performed by means of a capacitive sensor supported by the outer element and located in the central region thereof" as recited in claim 13.

The Olsen Patent

The Olsen Patent teaches a "programmable computer pointing device" as described in the Abstract. In the only relevant embodiment, shown in Figures 3 and 4C, the Olsen Patent teaches a mouse watch device (54) that has a microcontroller (58) programmed to provide common watch functions (i.e., a stop watch, a calendar, or a calculator), (col. 5, lines 54-61), and includes a keypad (66) for setting the time, a display (60) for the time and date, and a pressure sensor (72) for generating signals when pressed to control the position of a cursor on a display screen (26) of a computer (22), (col. 5, line 54, to col. 6, line 9).

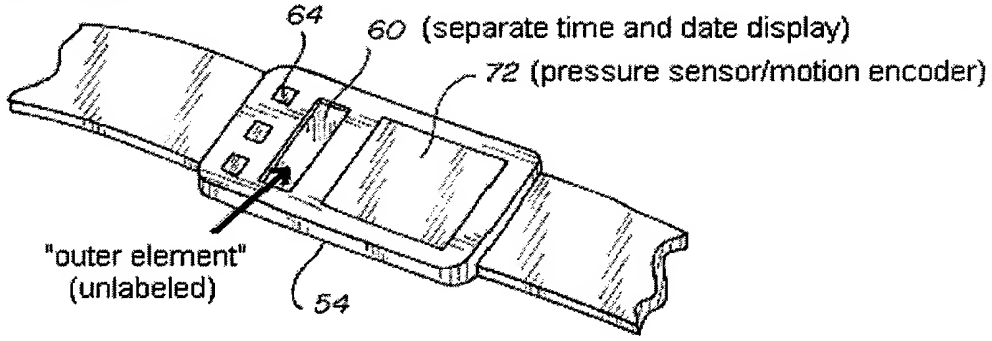
The Federal Circuit has ruled that a fair reading of what each reference teaches, as a whole, must be given. In re Gordon, 733 F.2d 900, 902; 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). In the present case, the Examiner has not given a fair reading as to what the Olsen Patent teaches as a whole because the Olsen Patent does not teach, or even suggest, disposing a sensor for controlling a cursor onto a time and date display. However, this is how the Examiner has used the teachings of the Olsen Patent.

In particular, the Examiner contends that Olsen teaches a computer interface (38) that can be incorporated into the watch taught by the Teres Patent (Office Action, dated April 19, 2004, page 3, line 21, to page 4, line 2; and the Advisory Action, dated October 22, 2004, page 2, lines 13-29). The Olsen Patent teaches a computer interface (38), as shown in Figure 3, but the computer interface is not the issue. It is the language of the present claims that is at issue, and each of the claims of the present application recite "first

control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means are at least partially visible through the touch sensitive pads and the outer element." The computer interface (38) of the Olsen Patent does not teach this feature.

In fact, the computer interface (38) is connected to a microcontroller (58), which is connected to both a separate time and date display (60) and a separate motion encoder (62). Olsen fairly teaches that the time and date display (60) is a separate and distinct structure from the motion encoder (62). As applied to the embodiment shown in Figure 4C of the Olsen Patent, the time and date display (60), the pressure sensor (72), (i.e., a motion encoder for finger motion), and the keys (64) for setting time are separate structures (col. 6, lines 5-17). A fair reading of the Olsen Patent is that the time and date display (60) and the pressure sensor (72) for controlling the cursor of a computer screen are completely separate structures such that any "outer element" covering the display screen cannot partially support the pressure sensor (72). To illustrate this point, a modified version of Olsen's Figure 4C with an unlabeled "outer element" indicated is provided below.

FIG. 4C



Of note, the Olsen Patent teaches a pressure sensor (72) and not a "capacitive type" sensor as recited in claims 1, 10 and 13 of the present invention. A person of ordinary skill in the art would know that pressure sensors and capacitive type sensors are not the same type of sensor. For example, the embodiment illustrated in Figures 6 and 7 of the present application includes touch sensitive sensors comprising sensitive pads (16) and a pressure sensor comprising piezoelectric crystal (44) as described on page 6, lines 25-37, of the instant specification as originally filed. Thus, a person skilled in the art would recognize that a touch sensitive sensor merely needs to be touched in order to be activated whereas a pressure sensor is a device that requires the application of sufficient pressure along a specific direction in order to be activated. In fact, the embodiment in accordance with the present invention as recited in claim 16 includes "first control means being formed of a plurality of touch sensitive sensors" and "second control means...formed by said outer element associated with a pressure sensor."

In summary, the Olsen Patent reasonably teaches a watch having a time and date display (60) that is separate from the pressure sensor (72) for controlling a cursor of a computer screen. The Olsen Patent does not teach, or even suggest, a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads and the outer element" as recited in claims 1, 10 and 13 of the instant invention.

In other words, the Olsen Patent does not stand for the proposition that a pressure sensor can be disposed on a partially transparent outer element covering a time and date

display. The Olsen Patent also does not stand for the proposition of converting pressure sensors into capacitive sensors, or vice versa.

Furthermore, the Olsen Patent does not teach, or even suggest, (i) the "means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors" as recited in claim 1; (ii) "the direction of movement of said cursor depends on the concentric zones actuated or two adjacent concentric zones which are actuated simultaneously" as recited in claim 11; and (iii) the "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof" as recited in claim 13.

The Ferrari Patent

The Ferrari Patent teaches a "touchpad providing screen cursor/pointer movement control" that utilizes a plurality N of capacitance sensing cells arranged in row/column array to cooperate with a fingertip to produce an output signal that controls movement of a cursor/pointer across a display screen (See ,Abstract, and Figure 1). The device taught by the Ferrari Patent pertains to the manual control of a cursor on a computer display monitor (col. 1, lines 25-28). The array of the device taught by the Ferrari Patent provides X-direction cursor movement commands (i.e., left/right commands) as the fingertip is moved, or rolled sideways, on the array's upper surface and Y-direction cursor movement commands (i.e., up/down commands) are provided as the fingertip is moved or pitched end to end on the upper surface of the array (See Figures 6 and 6, col. 4, line 65, to col. 5, line 5).

Pressing vertically down into the upper surface of the array provides Z-information, which corresponds to "switch-closed information" (col. 5, lines 5-25).

The Ferrari Patent explains that the sensors of the array detect a bright blob signal (170), which corresponds to the contact area of a fingertip (18) wherein the Z-direction depression of the fingertip modifies the mass of the blob signal (col. 9, lines 19-28). The detection of the center of the blob (170) is referred to as the "zero-moment value" (col. 11, lines 26-28). On the other hand, X and Y displacements of the finger on the array's top surface are referred to as the first-moment coordinates, which are used to determine cursor movement (See Figures 5A to 5I, col. 5, lines 18-31, and col. 9, lines 29-61).

While the Ferrari Patent teaches calculating X and Y array outputs (302), (303) using the first-moment-coordinates and the zero-moment-value followed by analog computation of analog values proportional to the zero and first moment (col. 11, lines 33-41), the Ferrari Patent does not teach, or even suggest, (i) "means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors" as recited in claim 1; (ii) "the direction of movement of said cursor depends on the concentric zones actuated or two adjacent concentric zones which are actuated simultaneously" as recited in claim 11; and (iii) the "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof" as recited in claim 13.

The Federal Circuit has ruled that a fair reading of what each reference teaches, as a whole, must be given. In re Gordon, 733 F.2d 900, 902; 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). In the present case, the Examiner has not given a fair reading as to what the

Ferrari Patent teaches as a whole. It appears the Examiner contends that because the Ferrari Patent teaches analog values are proportional to the zero and first moments of the 2-D pattern, the device taught by Ferrari detects the speed of the user's finger on the sensor array (See Office Action, dated April 19, 2004, page 8, lines 16-20; and see Advisory Action, dated October 22, 2004, page 2, lines 40-49).

However, this is not a fair reading of the content of the Ferrari Patent. The Ferrari Patent fairly teaches calculating X and Y outputs (302), (303) using first-moment-coordinates (i.e., X and Y displacements) and zero-moment-value (i.e., Z-direction pressure), (col. 11, lines 23-41). Thus, the X and Y outputs (302), (303) are functions of displacement and pressure. The Ferrari Patent does not teach, or fairly suggest, that the speed of movement of a user's finger over the array of capacitance sensing cells is a variable used to control cursor movement. A person of ordinary skill in the art would realize that speed is a variable defined by the time rate of change of displacement. Any ratio dependent on displacement and pressure, as the Examiner contends is taught by Ferrari, neither defines a time rate of change of displacement (i.e., speed) nor would be dependent on speed.

Summary of the Prior Art

The Teres Patent teaches a watch having capacitive sensors attached to the watch glass for sensing the writing of a character on the glass. The Teres Patent does not teach structure for controlling the movement of a cursor on a screen.

The Olsen Patent teaches a watch having a display for time and date data and a separate pressure sensor for controlling the movement of a cursor for a computer screen. The Olsen Patent does not teach that the pressure sensor is associated with the display for

time and date data in any way. Furthermore, the Olsen Patent does not explain how the pressure sensor is constructed or how it specifically operates to control the movement of a cursor on the computer screen.

The Ferrari Patent teaches a touchscreen for controlling the movement of a cursor on a computer monitor, wherein the touchscreen includes a row/column array of capacitive sensing cells that determine cursor movement on the basis of X and Y displacement, and Z-direction pressure, of a finger on the upper surface of the array.

Furthermore, neither the Teres Patent, the Olsen Patent, nor the Ferrari Patent teaches, or even suggests, a "means for detecting the speed of the user's finger" as recited in claim 1, or that "the direction of movement of said cursor depends upon concentric zones activated or two adjacent zones which are activated simultaneously" as recited in claim 10, or a "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein the second control means are also formed by a touch sensitive sensor" as recited in claim 13.

In sum, the proposed combination does not create a prima facie showing of obviousness of claims 1, 10 or 13. As taught by Olsen, a cursor-controlling pressure sensor would not be attached to the glass of the display for time data; instead, Olsen teaches that the pressure sensor is a separately disposed structure remote from the display for time data. The Ferrari Patent is limited to teaching that capacitor sensor arrays for controlling the position of a cursor on a computer screen were known. The teachings of the Ferrari Patent can only serve to suggest modification of the structure of the cursor controlling pressure sensor, but it cannot make up the deficiency in the teachings of the Teres Patent and the Olsen Patent wherein the capacitive sensors for detecting writing on the glass of the time display would be separately disposed from the sensor for controlling the cursor.

In other words, no reasonable combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent would teach, or even suggest, a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads and the outer element" as recited in claims 1, 10 and 13 of the instant invention.

Furthermore, as shown above, the scope and content of the prior art (i.e., the Teres Patent, the Olsen Patent, and the Ferrari Patent) does not reasonably teach, or suggest, "means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors" as recited in claim 1. Therefore, the Section 103 rejection standing against claim 1 over the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent is untenable and must be withdrawn because the prior art does not disclose the claimed subject matter.

Claim 10

The arguments in support of patentability of instant claim 10 incorporate the arguments in support of patentability of claim 1. Specifically, the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent fails to teach, or even suggest, a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads and the outer element" as recited in claim 10 of the instant invention.

Furthermore, the scope and content of the prior art (i.e., the Teres Patent, the Olsen Patent, and the Ferrari Patent) does not reasonably teach, or suggest, that the "sensitive pads are arranged in concentric zones, the direction of movement of said cursor depends upon concentric zones activated or two adjacent zones which are activated simultaneously" as recited in claim 10. Specifically, the Teres Patent is silent regarding control of a cursor of a computer display. The Olsen Patent is limited to teaching a pressure sensor (72) for controlling a cursor of a computer display screen (26); however, the Olsen Patent does not teach an array of pressure sensors and the reference does not teach any particular geometry for an array of pressure sensors. Lastly, the Ferrari Patent teaches a row/column array of capacitance sensor cells, as shown in Figure 1. The Ferrari Patent clearly does not teach sensors "arranged in concentric zones...wherein the speed of movement of said cursor depends on the concentric zone actuate or two adjacent concentric zones which are actuate simultaneously" as recited in claim 10.

It is noted that the Examiner has offered no evidence, and has made no argument, to show that the prior art teaches sensors "arranged in concentric zones" for controlling a cursor (See Office Action, dated April 19, 2004, page 10, line 5, to page 6, line 3). Therefore, the Section 103 rejection standing against claim 10 over the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent is untenable and must be withdrawn because the scope and content of the prior art does not disclose or suggest the claimed subject matter. The Examiner has not established a prima facie case of obviousness of against this claim.

Claim 13

The arguments in support of patentability of instant claim 13 incorporate the arguments in support of patentability of claim 1. Specifically, the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent fails to teach, or even suggest, a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads and the outer element" as recited in claim 13 of the instant invention.

Furthermore, the scope and content of the prior art (i.e., the Teres Patent, the Olsen Patent, and the Ferrari Patent) does not reasonably teach, or suggest, there is "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof" as recited in claim 13. A person of ordinary skill in the art would recognize that the "second control means" recited in claim 13 pertains to actuating a "click function" and not to movement of a cursor (see, e.g., instant specification, page 1, lines 13-16, and page 5, line 36, to page 6, line 2).

Specifically, the Teres Patent does not teach any control mechanism for selecting an object on a screen. The Olsen Patent teaches that a switch (28) can be used to select an icon on a display screen (26) of a computer (See Figure 1, col. 4, lines 9-17). However, the Olsen Patent does not teach, or even suggest, that these switches would be supported in any way by an "outer element" covering the display (60). The Ferrari Patent teaches control of cursor movement across a display screen (See Abstract); however, the Ferrari

Patent does not teach, or even suggest, structure for selecting an object on a screen or for carrying out a command related to an object on a screen.

It is noted that the Examiner has offered no evidence, and has made no argument, to show that the prior art teaches "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof" as recited in claim 13 (See Office Action, dated April 19, 2004, page 6, lines 7-15). Therefore, the Section 103 rejection standing against claim 13 over the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent is untenable and must be withdrawn because the prior art does not disclose or suggest the claimed subject matter. The Examiner has not established a prima facie case of obviousness of the claims.

Claim 16

Claim 16 depends upon claim 11, which depends upon claim 10. Therefore, the arguments in support of patentability of instant claim 16 incorporate the arguments in support of patentability of claim 10. Claim 16 further recites "second control means for selecting an object shown on said screen or carrying out a command relating to said object" from claim 11, wherein "said second control means are formed by said outer element associated with a pressure sensor." The combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent additionally fails to teach this feature recited in claim 16.

Specifically, the Teres Patent does not teach any control mechanism for selecting an object on a screen. The Olsen Patent teaches that a switch (28) can be used to select an

icon on a display screen (26) of a computer (See Figure 1, col. 4, lines 9-17). However, the Olsen Patent does not teach, or even suggest, that these switches "are formed by said outer element associated with a pressure sensor" as recited in claim 16. As evident from Figure 4C of the Olsen Patent, the "outer element" covering the display (60) is in no way reasonably associated with the pressure sensor (72). The Ferrari Patent teaches control of cursor movement across a display screen (See Abstract); however, the Ferrari Patent does not teach, or even suggest, structure for selecting an object on a screen or for carrying out a command related to an object on a screen. In addition, the Ferrari Patent teaches "capacitance sensing cells" (See Abstract), and does not pertain to pressure sensors and related structures.

The Examiner suggests that the combination of the Teres Patent and the Olsen Patent would teach a device having both a "computer interface" for moving the cursor and a trackball for selecting objects on a screen (Office Action, dated April 19, 2004, page 3, line 21, to page 4, line 2, and page 7, lines 5-8). However, Applicant contends the Examiner's position is based upon a severe mischaracterization of the teachings of the prior art.

Specifically, the Olsen Patent teaches a "track ball" (70), as shown in Figure 4B, is a motion encoder for moving a cursor on display screen (26), (col. 5, line 65, to col. 6, line 5). On the other hand, switches (28) are used to select icons on the display screen and to initiate computer operations (26), (col. 4, lines 10-17). The Olsen Patent does not teach that the switches (28) are pressure sensors.

There is simply noting in the Olsen Patent to teach, or even suggest, that a trackball is a "second control means for selecting an object shown on said screen or carrying out a command relating to said object" as the Examiner contends. Furthermore, neither the

Teres Patent, nor the Ferrari Patent, can make up this deficiency. Therefore, the rejection of claim 16 under 35 U.S.C. § 103(a) based upon the Teres Patent, the Olsen Patent, and the Ferrari Patent is untenable and must be withdrawn.

2. The Examiner failed to properly establish a prima facie case of obviousness under 35 U.S.C. 103 because the prior art does not reasonably suggest the combination or a reasonable expectation of success.

A proper rejection under Section 103 also requires showing (1) that the prior art would have suggested to a person of ordinary skill in the art that they should make the claimed device or carry out the claimed process, (2) that the prior art would have revealed to a person of ordinary skill in the art that in so making or doing, there would have been a reasonable expectation of success, and (3) both the suggestion and the reasonable expectation of success must be found in the prior art and not in the applicants' disclosure. In re Vaeck, 947 F.2d 488, 493; 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991).

In the present case, in order to justify the rejection of claims 1-5, 7, 8 and 10-18 under 35 U.S.C. § 103(a) as unpatentable over the Teres Patent in view of the Olsen Patent, and further in view of the Ferrari Patent, the prior art must provide the suggestion to combine the teachings of the references, and that such a combination would be successful. However, the prior art does not teach, or suggest, that the capacitive sensors attached to the glass of the watch taught by the Teres Patent should be modified to sense finger movements for the purpose of controlling a cursor of a computer screen. Instead, the prior art would suggest no more than, at most, as provided by the Olsen Patent, that a structure separate from the glass of the time display would be added so as to provide a

sensor for controlling the movement of the cursor on a computer screen. Consequently, the proposed rejection under 35 U.S.C. § 103(a) based on the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent cannot teach, or even suggest, a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads and the outer element" as recited in claims 1, 10 and 13 of the instant invention

In view of this plain deficiency in the teachings of the prior art, it is evident that the Examiner has invoked impermissible hindsight, picking and choosing from isolated disclosures, using Applicant's invention as the instruction manual. In re Fritch, 972 F.2d 1260, 1266; 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992). Therefore, the rejection under 35 U.S.C. § 103(a) is untenable and must be withdrawn because the prior art neither provides the suggestion to combine the references, nor a reasonable expectation of success that such a combination would fall within the scope of the invention claimed.

Conclusion

Applicant has shown that the rejection of independent claims 1, 10 and 13, and of dependent claim 16, under 35 U.S.C. § 103 is untenable and should be withdrawn because neither of the Teres Patent, the Olsen Patent nor the Ferrari Patent teach, or even suggest, either alone or in combination multiple features of the claimed invention. First, the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent does not reasonably teach a watch having "display means for at least one item of time related data" wherein the "first control means for controlling the movement of a cursor on a computer

screen" is "formed of a plurality of touch sensitive sensors...such that the display means is are at least partially visible through the touch sensitive pads" as recited in independent claims 1, 10 and 13 of the instant invention. Second, none of the prior art references reasonably teach, or even suggest, (i) the "means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors" as recited in claim 1; (ii) "the direction of movement of said cursor depends on the concentric zones actuated or two adjacent concentric zones which are actuated simultaneously" as recited in claim 10; (iii) the "second control means for selecting an object shown on said screen or carrying out a command relating to said object, and wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof" as recited in claim 13; and (iv) the "second control means for selecting an object shown on said screen or carrying out a command relating to said object...wherein said second control means are formed by said outer element associated with a pressure sensor" as recited in claim 16.

Lastly, the rejection of claims 1-5, 7, 8 and 10-18 under 35 U.S.C. § 103(a), based on the combination of the Teres Patent, the Olsen Patent, and the Ferrari Patent, is untenable and should be withdrawn because the rejection relies on impermissible hindsight and is not grounded on a suggestion to combine, coupled with a reasonable expectation of success, found in the prior art. On the contrary, the proposed combination of references facially fails to provide a reasonable expectation of success because the combination does not produce a device that includes all of the claimed subject matter.

Respectfully submitted,

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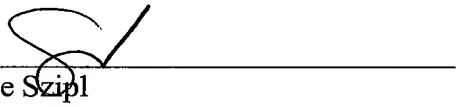

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CLAIMS APPENDIX (A)

1. A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch including first control means for controlling the movement of a cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element such that the display means are at least partially visible through the touch sensitive pads and the outer element, wherein the touch sensitive sensors are of the capacitive type and sensitive pads are formed by electrodes deposited underneath the outer element, and wherein it further includes means for detecting the speed of a user's finger over said outer element or the actuation frequency of successive sensors.

2. The watch according to claim 1, wherein said display means include an analogue display protected by said outer element which defines the watch crystal, said sensitive pads being at least partially superposed with said analogue display.

3. The watch according to claim 1 or 2, wherein the set of said sensitive pads of said touch sensitive sensors forming said first means is supported by said outer element.

4. The watch according to claim 1 or 2, wherein a part of said sensitive pads of said touch sensitive sensors is arranged in the top portion of the case of the watch surrounding said outer element.

5. The watch according to claim 1, wherein said respective sensitive pads of said plurality of touch sensitive sensors are arranged in the shape of a matrix defining lines and columns which extend over most of said outer element.

6. (Cancelled)

7. The watch according to claim 1, wherein the ratio between the movement of said cursor and the path taken by a user's finger across said outer element is less at low speed or actuation frequency than at relatively high speed or actuation frequency.

8. The watch according to claim 5, wherein the movement of said cursor over said computer screen substantially corresponds to the path taken by the user's finger over said outer element.

9. (Cancelled)

10. A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch including first control means for controlling the movement of a cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element such that the display means are at least

partially visible through the touch sensitive pads and the outer element, wherein the touch sensitive sensors are of the capacitive type and sensitive pads are formed by electrodes deposited underneath the outer element, wherein said sensitive pads are arranged in concentric zones, the direction of movement of said cursor being determined by the orientation of the pad or pads actuated relative to the centre of said concentric zones, and wherein the speed of movement of said cursor depends on the concentric zone actuated or two adjacent concentric zones which are actuated simultaneously.

11. The watch according to claim 1, further including second control means for selecting an object shown on said screen or carrying out a command relating to said object.

12. The watch according to claim 11, wherein said second control means are arranged in the top portion of the case substantially in the 6 o'clock position.

13. A watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch including first control means for controlling the movement of a cursor on a computer screen, said first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element such that the display means are at least partially visible through the touch sensitive pads and the outer element, wherein the touch sensitive sensors are of the capacitive typer and sensitive pads are formed by electrodes

deposited underneath the outer element, further including second control means for selecting an object shown on said screen or carrying out a command relating to said object, wherein said second control means are also formed by a touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof.

14. The watch according to claim 11, wherein said second control means are formed by a push-button associated with an electric contactor.

15. The watch according to claim 11, wherein said second control means are arranged in a link of the wristband of the watch or in a portion of the wristband of the watch.

16. The watch according to claim11, wherein said second control means are formed by said outer element associated with a pressure sensor, said selection of an object or said command relating to said object being performed by applying pressure onto said outer element.

17. The watch according to claim 16, wherein said pressure sensor is formed by a piezoelectric crystal arranged on the periphery of said outer element.

18. The watch according to claim 11, wherein said second control means are formed by said outer element associated with at least one micro-contactor or small travel contactor.

EVIDENCE APPENDIX (B)

None.

RELATED PROCEEDINGS APPENDIX (C)

None.